

[54] **PRESSURIZED ARRANGEMENT INCLUDING TIMERS FOR METERING INK ON THE FOUNTAIN ROLLER OF A PRINTING PRESS**

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Related U.S. Application Data

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[30] Foreign Application Priority Data

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[58] Field of Search 101/365, 363, 364, 366, 101/349, 350, 148, 147, 206, 207, 208, 210, DIG. 26; 118/259, 410

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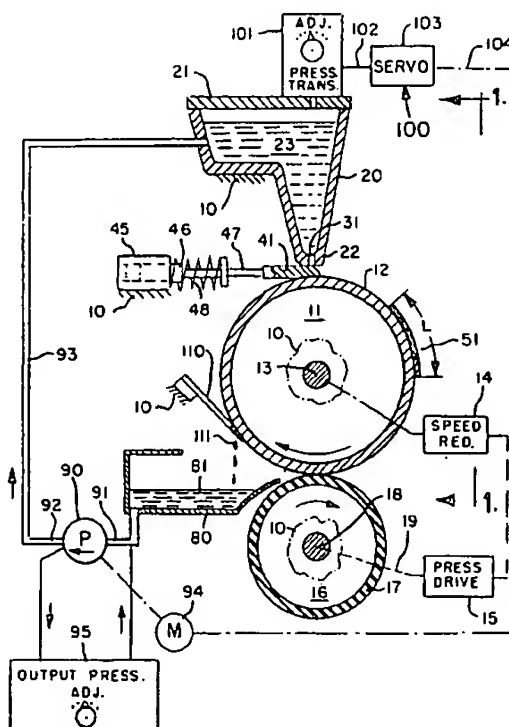
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[57] ABSTRACT

An ink fountain of the type in which ink is metered from nozzles located in respective zonal positions. The nozzles have narrow axially extending openings in general alignment with one another closely side by side. A tank is provided adjacent the fountain roller, with the nozzles being in the form of slots at the bottom of the tank, the tank being sealed and connected to a source of viscous ink under predetermined pressure. Reciprocable slides are arranged side by side interposed between the nozzles and the surface of the fountain roller, each slide having a reference position for normally blocking off ink flow from the associated nozzle and being retractable to open the nozzle. A solenoid is connected to each of the slides for forcibly and temporarily retracting the slide from its reference blocking position. Each solenoid has a biasing spring for restoring the slide to its reference blocking position. An individually adjustable timing device is controllably connected to each solenoid for cyclically energizing it for pre-set intervals of time which correspond to the ink requirement in the respective zonal position. The tank in the preferred embodiment is supplied with ink through a supply line fed by a pump from an open reservoir.

9 Claims, 4 Drawing Figures



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TITLE: Pressurized arrangement including timers for
metering ink on the
fountain roller of a printing press

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It is a well known fact that the ink requirements across
the width of a printed
page is not the same column by column or zone by zone. In
some of the column
positions there may be heavily pigmented areas as, for
example, a half-tone
illustration with a dark background, requiring more ink to
be fed in that
position than in other positions across the page which are
only lightly
pigmented.

It will be apparent to one skilled in the art that the
objects of the invention
have been amply carried out. Since all of the nozzles have
the same cross
sectional geometry and are subjected to the same pressure,
each nozzle
produces the same instantaneous rate of discharge of ink.
However, the average
rate of discharge which depends upon the time factor may be
easily and
conveniently varied over wide limits by a simple manual
adjustment of time
interval. While it is true that a separate timer is
required for each of the
numerous slides across a page width, timers employing solid
state devices and
susceptible to accurate calibration may be very cheaply
obtained on a
commercial basis and may be expected to last indefinitely
so that the overall
cost of the presently disclosed control system is much
lower than comparable